January 3, 2003

Mr. Charlie Probasco
Stant, Inc.
1620 Columbia Avenue
Connersville, IN 47331

Dear Mr. Probasco:

Re: Exemption No.:
041-16797-00013

The application from Stant, Inc., received on November 18, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following emission units, to be located at 1620 Columbia Avenue, Connersville, Indiana, is classified as exempt from air pollution permit requirements:

(a) One (1) natural gas fired boiler, identified as 6615041, constructed in 1966, exhausting to stack 02, maximum heat input capacity: 5.02 million British thermal units per hour.

(b) One (1) natural gas fired boiler, identified as 6615042, constructed in 1966, exhausting to stack 03, maximum heat input capacity: 5.02 million British thermal units per hour.

(c) One (1) natural gas fired boiler, identified as 6608030, constructed in 1966, exhausting to stack 04, maximum heat input capacity: 2.68 million British thermal units per hour.

(d) One (1) natural gas fired boiler, identified as 6620086, constructed in 1966, exhausting to stack 05, maximum heat input capacity: 8.36 million British thermal units per hour.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-2-3 (Particulate Emissions Limitations for Facilities Constructed prior to September 21, 1983), the particulate matter emissions from each of the four (4) boilers, constructed in 1966, is limited to 0.75 lb/mmBtu.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

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cc: File - Fayette County
Fayette County Health Department
Air Compliance - Joe Foyst
Permit Tracking
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name: **Stant Manufacturing, Inc.**
Source Location: **1620 Columbia Avenue, Connersville, Indiana 47331**
County: **Fayette**
SIC Code: **3714**
Operation Permit No.: **041-16797-00013**
Permit Reviewer: **Madhurima D. Moulik**

The Office of Air Quality (OAQ) has reviewed an application from Stant Manufacturing, Inc. relating to the operation of boilers for heating purposes. The source previously owned an operated a metal painting facility, but currently the paint line is no longer in operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) natural gas fired boiler, identified as 6615041, constructed in 1966, exhausting to stack 02, maximum heat input capacity: 5.02 million British thermal units per hour.

(b) One (1) natural gas fired boiler, identified as 6615042, constructed in 1966, exhausting to stack 03, maximum heat input capacity: 5.02 million British thermal units per hour.

(c) One (1) natural gas fired boiler, identified as 6608030, constructed in 1966, exhausting to stack 04, maximum heat input capacity: 2.68 million British thermal units per hour.

(d) One (1) natural gas fired boiler, identified as 6620086, constructed in 1966, exhausting to stack 05, maximum heat input capacity: 8.36 million British thermal units per hour.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Registration No. 041-11917-00013, issued on February 26, 2001.

Some of the emission units included in Registration No. 041-11917-00013, including Boiler # 6608013, a natural gas-fired oven, and a metal painting line, are no longer in operation, reducing the potential to emit of criteria pollutants below exemption levels. Therefore, an exemption will be issued to the source.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
02	Boiler	24.0	2.0	105	300 - 350
03	Boiler	24.0	2.0	105	300 - 350
04	Boiler	24.0	2.0	60	300 - 350
05	Boiler	24.0	2.0	160	300 - 350

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on November 18, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.7
PM-10	0.7
SO_2	0.1
VOC	0.5
CO	7.8
NO_x	9.2

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3 and an exemption will be issued.

County Attainment Status

The source is located in Fayette County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Fayette County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Fayette County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) The boilers at the source are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40, Subpart Dc) because each boiler has a capacity less than 10 million British thermal units per hour and was constructed prior to June 9, 1989.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Fayette County and the potential to emit PM_{10}, CO, SO_2, VOC and NO_X is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is not subject to the requirements of this rule because the potential to emit of all regulated criteria pollutants is less than 250 tons per year and it is not one of the 28 listed source categories.

326 IAC 2-4.1-1 (New Source Toxics Control)

The total source potential to emit of each individual HAP is less than ten (10) tons per year and a the potential to emit of any combination of HAPs is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-4.1-1 are not applicable.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

This rule does not apply to combustion sources for indirect heating. Therefore, the boilers at the source are not subject to 326 IAC 6-3-2.

326 IAC 6-2-3 (Particulate Emissions Limitations for Facilities Constructed prior to September 21, 1983)

The four (4) boilers, all constructed in 1966, with a total heat input capacity of 21.1 million British thermal units per hour, must comply with the PM emission limitation of 326 IAC 6-2-3. This limitation is based on the following equation is given in 326 IAC 6-2-3:

$$Pt = C \times a \times h / 76.5 \times Q^{0.75} \times N^{0.25}$$

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 mmBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 mmBtu/hr heat input.

h = Weighted average stack height in feet.

For the four (4) boilers:
$Pt = 50 \times 0.67 \times 24 / 76.5 \times (21.1)^{0.75} \times 4^{0.25} = 0.75$ lb/MMBtu
PM limit for 5.02 MMBtu per hour boilers = 0.75 lb/MMBtu x 5.02 MMBtu/hr x 8760 hr/yr /2000 lb per ton = 16.6 tons per year

PM limit for 2.68 MMBtu/hr boiler = 8.86 tons per year.

PM limit for the 8.36 MMBtu/hr boiler = 27.6 tons per year.

The PTE for PM for each boiler is below its respective limit set by 326 IAC 6-2-3. Therefore, all four (4) boilers are in compliance with this rule.

Conclusion

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 041-16797-00013.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
Company Name: Stant Manufacturing, Inc.
Address City IN Zip: 1620 Columbia Avenue, Connersville, Indiana
CP: 041-16797
Plt ID: 041-00013
Reviewer: Madhurima D. Moulik
Date: December 4, 2002

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
21.1	184.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.2	0.7	0.1	9.2	0.5	7.8

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions
Company Name: Stant Manufacturing, Inc.
Address City IN Zip: 1620 Columbia Avenue, Connersville, Indiana
CP: 041-16797
Plt ID: 041-00013
Reviewer: Madhurima D. Moulik
Date: December 4, 2002

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.939E-04	1.108E-04	6.925E-03	1.662E-01	3.139E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.617E-05	1.016E-04	1.293E-04	3.509E-05	1.939E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.